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ART EDUCATION, AND THE TEACHING OF DRAWING IN PUBLIC SCHOOLS.

[An address delivered by Mr. Walter Smith, Professor of Art Education and Head Master of the Normal Art School in the City of Boston, also State Agent for Inspector of Art Education in the Commonwealth of Massachusetts, before the Massachusetts State Teachers' Association, in Boston, Oct. 20, 1871.]

THE occasion upon which I have the honor of appearing before you, is one of *such* rare occurrence, its importance educationally is so great, and the opportunity it gives me for the discharge of one of the first duties of my office so exceptionally timely, that I wish to depart from my usual custom in addressing extempore remarks upon the subject I have to treat; and in order that I may neither waste your time by repetition, nor forget any connecting link in my discourse, I have written what I have to say, and will ask for your kindly attention and indulgence, whilst I read it to you.

In the presence of a body of Educationists such as that I see before me, I need not do more than refer to the fact, that, by the law of Massachusetts, Art Education has been engrafted upon its far-famed system of public instruction, and henceforward will form a part, and, I hope and believe, no unimportant section of its excellent organization. Provision for the instruction in drawing of teachers and children in the public schools, and of adults in the night classes, either has been already made, or will be arranged for, as opportunities occur and teachers can be found. The passing of

this law, and the efforts made to comply with it, will, it is supposed, create a desire for information concerning art education, of especial interest just now; and this must be the explanation of my being here to-day. Having been appointed by this City and the State to assist in their development of art education, I would take this opportunity of stating that I believe the choice of the Art authorities of the United Kingdom, upon the request of the School Board of this city, fell upon me for recommendation to the appointments I now hold, because, though acquainted with the national system of my own country and of other European States, I am not committed to, nor do I wholly approve of, any one of them, but believe in the construction of a system, in a country where the subject is new; we can adapt the good parts of all the old methods to the requirements of this country, and omit all the bad parts. And there can be no reason why the thoroughness which characterizes the general education of Massachusetts should not influence and give tone to any instruction in technical subjects which may be added to it. Whilst we may thus profit by the experience of other nations, and older civilizations than our own, there will be many features of this country and of society, so superior to theirs, and so much more favorable to the development and advancement of education, that I look forward to a future in which our field of art education shall, in no prominent part, be a reflex of others, but be a combination of excellences that will offer a model for their imitation.

So much of a general introduction I conceived to be necessary, before speaking practically on the subject we are about to consider.

That subject briefly described is "*Art Education, and the teaching of Drawing in Public Schools.*"

The kind of drawing which the State requires that its citizens shall have an opportunity of studying, is called "industrial drawing"; and wisely so called, for in that lies a justification of its public action in the matter.

It is so described, I apprehend, to distinguish it from those more ornamental or professional branches of art which people study rather as an amusement or gratification, or as a lucrative profession, than as an important element in the success of trades

and manufactures. Economists are agreed that it fairly falls within the scope of government in any civilized country, to initiate movements by which the trades or manufactures carried on by its subjects shall be improved in character and increased in value, and thus through a higher appreciation find a wider market for their consumption. The prosperity of the many is the argument upon which this agreement is founded. The principle thus acknowledged has led some of the most far-seeing and enlightened of modern governments to establish systems of art education, with a view of improving all branches of industrial trades and manufactures, having regard to the ultimate influence on production and sale, as well as increased value of exports, and articles of home consumption. The success of these experiments has been so great that several European states at the present time owe their prosperity in no slight degree to the artistic excellence of their manufactures, brought about mainly by their cultivation of art education.

The time has arrived when the government of this State, and more especially of this city, has viewed the matter in the same light; and thus we are upon the threshold of a new fabric, a system of art education for the City and the State.

The means whereby such a system would be best organized to meet the requirements of all classes of society, and keep supply and demand in their true relationship, has been a great problem to the educationists of this locality, as it has been previously to the educationists of the old world. There are three sections of the public to be educated, — children, adult artisans, and the public generally, who come under neither of the two first divisions. How this has been provided for in most of the European states I may here shortly tell you. For children, elementary drawing is taught as a part of general education in all public schools; for adult artisans, night schools and classes have been established in almost all towns or populous villages ; and for the general public, museums, galleries of art, and courses of public lectures on art subjects are becoming general. Upon the comparative value of these several means, there may be and is much difference of opinion; but upon one point there is a general agreement, viz.,

That *to make national art education possible, it must commence with the children in public schools.*

After several unsuccessful experiments, that is the conclusion at which, twenty years ago, the educationists of Great Britain arrived, and the progress which has since been made in art, education, and the consequent improvement of industrial art, is evidence enough that the problem had been solved, and that they were on the right track. To establish schools of art and art galleries, before the mass of the *community* were taught to draw, was like opening a university before people knew the alphabet; but to provide both of these agencies in conjunction with, or as a continuation of, the instruction in drawing in public schools, was like a logical sequence, going in rational order from strength to strength of an unbroken chain, from bud to branch, and from branch to flower, of natural educational growth.

Whilst England is appropriating all the features of the Massachusetts system of general education that are worth anything in Mr. Forster's scheme, we are borrowing from Great Britain, as well as from other countries, the most valuable portions of their experience in technical education; and I venture to prophesy that upon a better general basis we shall erect an infinitely better superstructure, so soon as the development of public opinion in this country will furnish us with the means for its accomplishment.

What has been done here in the way of instruction in night classes for adults, is sufficient to demonstrate the need of additional efforts, and has shown the extent of the field awaiting culture at our hands; and the fact that already a Boston Museum of Fine and Industrial Art is on the way, and its foundations laid on a broad and comprehensive plan, is a final proof that eventually no feature of a perfect scheme will be wanting to complete the fabric of Art Education.

Though these secondary agencies are matter of interest in a consideration of the whole subject, it is not with them especially that we have the most to do upon this occasion.

The teaching of drawing in public schools is that phase of the question which most nearly interests you, and concerning which I have the most to say. How, with our present means, and in a rea-

sonable time, is it to be brought about, and what can be done to make the teaching general?

Here, at this point, we are brought face to face with the same difficulty that has confronted the pioneers of art education, elsewhere, viz., Who is to teach drawing in the public schools? — and the question must be answered in the same way. To this there can be but one reply, which is, there can be no special teachers of drawing as a separate subject any more than of writing or arithmetic as separate subjects; but the general teachers themselves must learn and teach elementary drawing to the children, in the same way they learn and teach other subjects. It will only be by having a teacher of drawing in every class-room in every school in the State, that all the children can be taught to draw; and this you will see can only be accomplished by making the general teachers include drawing among their subjects of instruction. That is how the difficulty has been met in other countries, and is the only way possible of meeting it here. Now, if elementary drawing were either an abstruse subject, or as difficult of acquisition as a new language, it would seem something like a hardship that teachers, whose daily labor is so great and whose leisure is so scarce, should be expected to increase their labors and sacrifice their leisure to learn this new subject. But we have found in Europe that a valuable and sufficient power of drawing can be acquired by teachers who have the desire to learn in a comparatively short time, and without any very great sacrifice either of their leisure or their patience. At the present time, in the Boston Normal Art School the teachers of the city are receiving one lesson of one hour on alternate weeks, which, if they work out the exercises on each lesson, is in my opinion sufficient time to give; and I calculate that by next summer they will have passed through a course of instruction in two subjects, Free-hand and Model Drawing, qualifying them to give their pupils lessons in the same.

Another year we shall take up the subjects of Geometrical and Perspective Drawing; and though these subjects will entail a little more home work, they will be got through in the sessions of one year.

I can hardly suppose that you will deem such an amount of at-

tendance on two courses of lessons as too great a price to pay for the qualification to teach elementary drawing; and I would desire to inspire you with confidence in your own art powers, even if yet undeveloped, by saying that to those who are intimately acquainted with educational processes, as teachers must be, the labor of acquiring skill in drawing is reduced to a minimum, whilst the result is a practical certainty. As they have great experience in teaching other subjects, I have always found school-teachers, even with a very limited power of drwaing, to make by far the best teachers of drawing, and what they themselves acquire without difficulty, they teach most successfully.

Drawing is in many respects like a language, a visible language, the language of form, having but two letters in its alphabet, the straight line and the curve; in this respect like our own written words, made up of combinations of straight and curved lines, — with this difference, that whilst a word suggests the name and thought, drawing suggests the thing itself. Both drawing and writing depend for attainment on the same faculty, the faculty of imitation, though drawing, being simpler in its elements than writing, is the most easy of acquirement. It has been amply demonstrated that every person who can be taught to write can be taught to draw; and where both are taught simultaneously, they assist each other, — success in one being a certain indication of success in both.

Imitative power is common to the human race, and exists in children before they can either walk or speak. It is developed so early that from the moment a child can hold a pencil, it may be taught to imitate by drawing the forms it sees. Those children whom it is found impossible to teach to write, it would be waste of time to attempt to teach to draw; for want of capacity in the first must proceed from some physical deficiency which would prove fatal, also, to success in drawing. But for the rest, who your own experience will convince you are a somewhat considerable majority, as soon as they begin to go to school, so soon should they begin learning to draw, and they will be found to take to and acquire it best who commence it earliest, and pursue it the most systematically through the whole school course. Neither is any special gift of more than usual taste required to enable persons to become excel-

lent draughtsmen. It is a matter of mere conjecture whether such gifts exist at all; and it is certain that if they do exist their possession is of no account whatever, when compared with perseverance and a determination to succeed. The best draughtsmen I have known began to draw at about five years old or earlier; and it is a singular commentary on genius, which is supposed to be heaven-born, that those men who are most universally acknowledged to to be geniuses, have spent their industrious lives in self-improvement, ignoring their supposed endowments, and working patiently like journeymen whilst learning a trade.

It may be expected that I should refer to method or system in teaching drawing. Much undoubtedly depends upon the way in which teaching is carried on, that definite objects should be sought for, and the various steps be graduated in difficulty, though well defined in purpose. My own experience leads me to think there are good points in even very opposite methods, and failings in all. It is impossible, so long as human nature is varied in individuals, that any method of instruction should apply equally well to a number of different characters, or develop the faculties of all. A cast-iron method or sytsem presupposes such a similarity of disposition and faculties in pupils as never existed nor is likely to exist, and unless a system, whilst adhering closely to principles, is at the same time elastic in practice, it will probably cramp and destroy the faculties it was intended to develop. In this matter much depends upon the teacher, — a good, kind, and sympathetic teacher producing better results upon a bad system, than a bad teacher would upon the best of methods.

There are, however, some schemes of art instruction which have been more widely tried than others, and experiments in them more perfected by long practice.

The old drawing-master's method of giving shaded copies to beginners, without any arrangement of examples or sequence in subjects, is followed no longer in any national art schools in Europe, or in any public schools under government inspection. The use of flat examples only, without extensive illustration on, and explanation from, the blackboard, is also becoming a thing of the past. What is now commonly described as the English black-

board system of teaching elementary drawing is perhaps the most elastic and efficient of methods for class teaching, but it should not supersede individual instruction, simultaneously given; nor can it be used successfully without the concurrent use of text-books in the hands of each pupil, to supply accurate illustrations of the course of study, and to encourage home work in support of school work. Unless a pupil can be induced to work sometimes wholly by himself, he never attains to self-reliance, nor learns how to master an entirely new difficulty without resorting to assistance from other people.

The group of art instruction in elementary drawing which is considered suitable to the powers of the pupils in day schools comprises five subjects, and includes —1. Free-hand Drawing. 2. Model or Object Drawing. 3. Memory Drawing. 4. Geometrical Drawing. 5. Perspective. A thorough grounding in these subjects is one of the best preparations for any further study of the higher branches of art education. A pupil having passed examination in such, would be ready to take hold of the instruction in schools of art, or even to continue his studies by himself in more advanced subjects. The group of five subjects named, is that in which the public school-teachers of England have to become proficient, and for a successful examination in which the government grants a Drawing Certificate, stating that the holder is competent to give instruction in drawing in public schools.

The adaptation of this course of study to the graded schools of this country is not a difficult matter, the moment the corps of teachers become qualified to teach drawing; and it can be commenced at once in those subjects which the teachers themselves are practising, or have already become proficient in. The order in which the subjects are usually taken will decide the suitability of each to the different schools.

A simple arrangement would be as follows, giving three subjects in each grade of school,—

In Primary Schools — Free-hand, Model, and Memory Drawing.
" Grammar " Memory, Model, and Geometrical "
" High and Normal Schools — Memory, Model, and Perspective "

I propose to describe to you in what manner and to what degree these objects may be taught in the three grades of schools.

I. PRIMARY SCHOOLS.

FREE-HAND OUTLINE DRAWING.

In the very earliest lessons to the youngest children, drawings on the blackboard by the teacher are the only examples used, the illustrations being vertical, horizontal, and oblique lines singly and in simple combinations, such as angles, squares, triangles, and the division of straight lines into equal or proportionate parts; curved lines associated with straight lines on the simplest symmetrical arrangement. That is the commencement of free-hand drawing, the pupils drawing on their slates until the first difficulties are over. A moderate use of Roman capital letters is not objectionable for copies, but too frequent use is wearisome. Very young children will draw best those forms in which there are the fewest possible lines, and those lines expressing the forms of objects they are most familiar with,—apples and pears, common crockery-ware, leaves of trees and flowers, and such like. The older pupils who are drawing free-hand outline from the board upon paper, should have their subjects alternated with flat copies, to be drawn either the same size as the originals, or enlarged a definite proportion, either a third, a fourth, or by measure, as an inch or two inches in height and proportionately in width. As all the blackboard lessons are exercises in the reduction of forms, it is well to vary the lessons by practice of the identical size and by enlargements. I have found it not to be a good custom to keep children drawing on slates longer than the time when they attain the power of fairly balancing the forms given them to copy. It is so easy to rub out errors upon slates that carelessness often results from too long practice on them.

In the choice of examples, it should be remembered that diagrams from objects should be represented geometrically, not by views of the objects as seen in perspective, until the pupils have arrived at drawing from objects. The principal use of free-hand outline drawing, is to teach pupils the proper use of materials, the names of lines and forms, and to educate the eye in judging of

proportion; also to inculcate perception of the beautiful in curves and forms of objects.

The time given per week to drawing should not be less than two hours. With the youngest children, the length of each lesson should not be more than half an hour, *i. e.* four *short* lessons per week; with those a little older, three lessons of forty minutes each; and with the oldest pupils who draw upon paper, two lessons of an hour each.

It is of some importance in maintaining interest in the lessons, that each should be complete in itself, the exercise be begun and finished in the allotted time; and if this be found difficult, it is better to take simpler examples with less work in them, than either to lengthen the time given, or leave the exercise unfinished. In the same class, if some pupils draw better than others, the best may be allowed to draw in books, and the more backward on slates. Each exercise should be criticised by the teacher during the lesson, in addition to the general criticism from the blackboard, thus combining individual with class instruction.

The object given as a lesson should be well drawn on the blackboard before the lesson begins, and the teacher in giving the lesson should commence by explaining its proportions and general character, and then draw it again, step by step, during the process of the lesson, being followed by the class, line for line, as the form develops on the board.

The standard of quality in outline varies in different countries; but whether a thick or thin line be allowed, it must be the same thickness or thinness everywhere; and the best line, in my opinion, is, a thin, gray, unbroken line, without the slightest variation in a whole drawing, either in color or breadth.

MODEL DRAWING IN OUTLINE.

The model drawing in primary schools should be of an exceedingly simple character, for into the proper practice of it perspective must more or less enter. Only the older children ought to attempt it; and the objects used, to be as much as possible those which appear of the same form on all sides. These may be defined as such objects as are turned in a lathe, or made upon a

potter's wheel, — thus a cylinder, a sphere, a cone, in geometric shapes; a vase without a handle, a goblet, or a wine glass, a basin, a saucer, a round bottle; or wooden vessels, such as a bucket or a round box. These have the double advantage of being symmetrical, enabling the teacher and pupils to use a central line in drawing them, and they will be seen alike by all the pupils, so that the explanations and demonstrations given on the blackboard will apply to all the drawings made.

The models used should be painted white, which displays the form better than any color. If rectangular solids be used, such as cubes, oblong blocks, prisms, square boxes, chairs or such like, the teacher will find himself plunged at once into all the difficulties of linear perspective, beyond the understanding of children so young as those in Primary schools.

With regard to the method of teaching, and implements used, what I have said with reference to free-hand drawing from flat examples on the blackboard applies similarly to object drawing. Care must be taken in setting a model for the class, that it is not placed so near to any pupil as to give him a distorted view, or so far away as to be seen with difficulty. The best position with regard to height is that the top of the object should be at least six inches below the level of the pupil's eye. A set of three or four dozen objects should be kept in each class-room, in a cupboard or cabinet reserved for the purpose, and teachers might occasionally exchange models of equal value with each other, so as to give freshness and variety to the subjects; otherwise the pupils may get wearied of drawing the same objects over and over again.

Combined with free-hand and model drawing, the definitions of plane geometric figures should be taught, and are best taught by being drawn as exercises, as well as learnt by heart. This will be preparation for geometrical drawing, to be afterwards learnt in the Grammar schools, as well as being of great value in imparting correct knowledge of common forms.

DRAWING FROM MEMORY.

The third subject for the Primary schools is Drawing from Memory.

I attach the very highest importance to the systematic development of memory drawing as an element of education, and art education is incomplete without it. Beginning with geometric forms of a given size, it will be found possible to lead even the children in Primary schools to reproduce entirely from memory the copies which they have already drawn, however elaborate and full of detail they may be. All the memory exercises will consist of recently finished drawings, the proportions of which will be easily remembered, though at first it may be necessary that the teacher should describe to the class some of the leading characters of the example given, to refresh the memory before the pupils proceed to draw it. At the conclusion of the exercise, the best and the worst efforts should be taken to the board, and their good and bad qualities pointed out and criticised, and an accurate drawing of the example be put on the board for each pupil to contrast and compare with his own work. He should then be allowed to correct and revise his drawing from the teacher's example upon the board. Home exercises in memory drawing may also occasionally be required of the pupils, with much advantage.

GRAMMAR SCHOOLS.

The group of subjects of Model, Memory, and Geometrical drawing, suitable for the pupils in grammar schools, introduces one new subject only, — that of geometrical drawing, which takes the place of free-hand outline, practised sufficiently in drawing from objects and memory. The model drawing may now be made to include such geometric forms as can be used to convey the first elementary rules of perspective, such as the convergence of parallel lines retreating from the eye, the foreshortening of lines and planes according to the angle they make with the direction in which the student is looking at the object, and other elementary rules. More difficult models being used, every pupil will have a different view of the same object, and though general principles may and should be explained by diagrams on the blackboard, the teaching will be more individual than before. The measuring of heights and widths proportionally and of vanishing planes, by means of the pencil held in the hand at the full extent of the outstretched arm, must be

explained to and practised by the pupils; for that is the only practical and accurate method of model drawing. This way of measuring, which every draughtsman and artist adopts, does not come under the head or description of mechanical measurement, being only the means of ascertaining the proportion of the various parts, as affected by the laws of perspective. Instead of single objects being given, as in the Primary schools, groups of objects may profitably be placed before the pupils, some of which they will have already drawn, and others which will be fresh to them. Geometric solids, such as the cube, oblong-block, triangular, square, pentagonal and hexagonal prisms and pyramids, as well as the cylinder, cone, and sphere, are very usefully employed, each or more than one at a time in conjunction with some familiar object, together composing a group of forms. There will shortly be in this city a complete set of such models, which will be deposited, for the examination of teachers, in the Appleton Street school; and I would commend them to your careful notice. The great difficulty, at present, which the friends of art education in America will have to meet, is the provision of suitable examples for study; so that I see no other way of forwarding the cause or of removing the difficulty than by establishing an agency, either by the State, or through private enterprise, where all the most approved models and copies may always be attainable at a moderate cost. At present, models which a professionally educated art master could conscientiously use, do not apparently exist on sale in the United States.

In England nearly forty years ago, when the nation was awakened to the necessity of at once giving an art education to its people, the two difficulties were the want of teachers and of copies. That will be our want, but it will exist no longer than people feel apathetic about the matter. When once a real earnest demand shall exist, the want can be supplied, in as many months as it has taken years to produce them in the old country. In this matter, England has been the pioneer, and we must profit by her experience.

MEMORY DRAWING.

Just as the groups of subjects in model drawing will be more

difficult than those used in Primary schools, so of course the memory exercises will be more advanced also. Sometimes a whole class may be required to draw any given example which has been practised months before, or perhaps formed part of a course in the Primary schools. Every pupil should have one lesson per week in drawing on the blackboard, in chalk, on a large scale. It would be well to let a third of the class draw either their models or memory exercises, upon the board,— each lesson,— so that during the week, if three lessons be given, all will have drawn upon the board.

GEOMETRICAL DRAWING.

The pupils having been previously taught the definitions of terms used in plane geometry, may be passed on to the construction of figures. Each pupil requires a good pair of pencil compasses, a ruler with inches marked upon it, and a ruled book of smooth paper to work his problems in. The teacher enunciates the problem to the class, who writes the enunciation from his dictation. He then works out the problem on the board, the class following, step by step. Six elementary problems are an hour's work, and four of the more intricate problems will take the same time. Every third or fourth lesson in geometrical drawing should be a resumé from memory of previous lessons. There is one consideration, with reference to this subject, teachers should strongly impress upon the minds of pupils. As demonstrations of the results are not required, their own accuracy must be the demonstration. If a geometrical drawing is not accurate, it is nothing, or worse than nothing. It does not pretend to be beautiful, and unless intensely true in its result, is not useful, but a piece of delusive and worthless ugliness. I mention this because pupils will sometimes apologize for inaccurate results, by stating that they *do* know how to work the problem, which always seems to me an aggravation of the original offence rather than an excuse for it. It is like a man caught in the act of telling a lie, who tries to excuse himself on the grounds that he knew it was a lie, and did not himself believe the statement he was making. Accuracy and inaccuracy are merely habits which are formed either by good training or bad, and careless instruction.

HIGH AND NORMAL SCHOOLS.

In the High and Normal schools a wider range of study is permissible, because the capacities of the students are more developed. Still, it seems to me that there is some danger in attempting too much. In future years it will be desirable that the students in the Normal schools should during their period of training, complete an advanced course of lessons in the five subjects of Free-hand, Model, Memory, Geometrical, and Perspective Drawing, and by passing examinations in them receive diplomas or certificates of competency to give instruction, the examinations being conducted and diplomas awarded by the responsible officers of the State governments. This, however, must be a matter of growth.

The model drawing of the High and Normal schools should be made a most instructive course, and besides illustrating the use of different materials, as chalk, monochrome, and color, be very comprehensive in subject. Drawing from plaster casts in crayon and sepia; from groups of natural objects, as fruits and flowers; from still life and objects of art, in water-colors, — will give a wider scope and a greater interest to the object drawing than was possible in the elementary schools.

Drawing ought to be so familiar to the pupils who have previously passed through the Primary and Grammar schools, that in the High and Normal schools it should be used generally in the study of other subjects, and exercises in botany, geology, natural history, anatomy, or mechanics be readily illustrated by drawings and sketches, in the preparation of which instruction would be given to the students in shading and coloring.

In these exercises high finish or pretty ornamental painting are not to be sought after, — good drawing, having a round effect, and fairly tinted like nature, being more educational, besides being more economical of time, than finished painting.

In time I hope the neglected subject of Art Education may become of so much value educationally, that we shall use it freely in acquiring knowledge of history, of the social life of other ages and peoples, of the glorious art epochs of the old world, and the still glorious natural phenomena which surround us every day in

the new world. A refined perception of the beautiful in nature and art, and the enjoyment arising therefrom, will be ample compensation for time spent in art study by those who derive no pecuniary or social advantages from it.

The additional subject of *Perspective* is put down for study in the High and Normal schools. It is of course of the very highest importance to the proper understanding of all kinds of drawing, and has the same relationship to linear representation that Grammar has to language. It would be possible to speak grammatically without a knowledge of grammar, and to draw accurately, as Turner did, without a technical knowledge of perspective; but these things are possible only to the few whose enormous experience compensates for their want of education. Perspective studied systematically gives the teacher of drawing such a grasp of the whole subject of linear representation, that, combined with model and memory drawing, he need never be at a loss for examples, nor fear to reproduce them.

In this subject, which is taught entirely on the blackboard, the teacher requires much power of illustration by sketches, and great clearness of verbal explanation, to make the problems intelligible to the student. Great experience in teaching the subject has enabled us to reduce its main principles to a plain system, and when we secure the assistance of a good text book, it will be found then comparatively easy of attainment. Geometrical drawing must necessarily precede the study of perspective, which is dependant on it for the construction of forms used, as well as for experience in handling the instruments by which it is worked out.

I feel now that I have occupied more than I had a right to of your valuable time, and with a few words will conclude. It is difficult, without illustrations and examples of reference, to convey clearly all that is meant about a system of art education. Being here also a comparatively new subject, I have been precluded from appealing to your remembrance of exhibitions and public displays of the works of students. It was intended to have here to-night a collection of drawings, the property of the State of Massachusetts, recently acquired, partly by gift and partly

by purchase, from the South Kensington Museum in London, illustrating the course of study in English schools of art. Practical difficulties stood in the way of this; but I am enabled to refer you to an exhibition which is shortly to be held in the rooms of the society of artists in Boston, which every lover of art and friend of art education should see. Including two valuable collections of students' drawings, — the one just referred to, and another which is the property of the city of Boston,— there will be also sets of works displaying the systems of art education in France and in Belgium. The three systems are entirely different, and I think you will agree with me in saying, when you see the works, that each has great and distinctive merits. The exhibition will offer the materials also for a comparison of results which will be of the greatest interest to the educationist. I believe I am right in saying that it will be open in about a fortnight from the present time.

Upon a just recognition of the good features in the systems of countries where the subject is not a new one, and a deliberate consideration of our own circumstances and requirements, let us hope in time to establish a sound system of art education in this State. It is not a branch of education capable of very rapid growth, for you know that "art is long"; but the same wisdom that has built up the magnificent educational system of Massachusetts, will, I feel confident, be as capable of perfecting and completing each phase and feature that it may be considered desirable to add to that system; and having passed the law that it shall be done, will be in no disposition to look back, or be impatient and lose heart if the highest results do not immediately manifest themselves.

We have the satisfaction of knowing that in beginning with the public schools, we are beginning at the right end; and we have the prospect of possessing before very long a central institute of art in the Boston Museum of Art, which will be like the headquarters of fine art for the State. The education of teachers will be provided for in the city by the Normal art school, and before very long there will be hardly a school in which satisfactory instruction is not given. The supply of examples to carry on an efficient course of art education will follow upon the demand for

them, without unnecessary delay, and thus I maintain the prospects of naturalizing the subject and providing for its development are of the most encouraging character. Above all there are men in this City and State who take the most comprehensive view of the public aspect of this question, and are disposed to spare neither their time nor their means in carrying it through. To them and to all others who assist in the cause I wish all success, and feel a strong gratification on my own part that I shall be permitted to help in the inauguration of a system of Art Education in this great country.

PROPORTION.

In the April number of the *Teacher* is an article upon Proportion. It was intended in that article to explain a corollary in Davies' Geometry, which the author left without a satisfactory explanation, and without the necessary data for its explanation. There is also some criticism upon the usual treatment of the subject of proportions; and a belief expressed, that, by a greater use of the principle of equimultiples, a much simpler system might be devised.

In this article it is attempted to present such a system. It is supposed to embrace all the principles of proportions required in Davies' Geometry, including such axioms and definitions of technical terms as are necessary.

1. Ax. 1. Equals multiplied by equals, give equals.

2. Ax. 2. Equals divided by equals, give equals.

3. Ax. 3. Quantities which are equal to the same quantity are equal.

4. Ax. 4. If a quantity be both multiplied and divided by the same number, the value is unchanged.

5. Def. 1. *Ratio* is such a relation of two quantities that the second is a multiple of the first.

6. Scho. 1. A ratio is expressed either in the common form ($a : b$), or in the fractional form ($\frac{b}{a}$).

7. Def. 2. *Proportion* is an expression of the equality of two ratios; $(a : b = m : n)$.

8. Scho. 2. This proportion is read, The ratio of a to b equals the ratio of m to n.

9. Scho. 3. The first term of a ratio, is called antecedent; the last term, consequent.

10. Scho. 4. The first and last terms of a proportion, are called extremes; and the others, means.

11. Cor. 1. The consequents are equimultiples of the antecedents (5 & 7).

12. Def. 3. *Alternation* is such a change in the arrangement of the terms, that they are taken alternately; thus, $a : b = m : n$ gives $a : m = b : n$.

13. Def. 4. *Inversion* is such a change in the arrangement of the terms, that the ratios are inverted; thus, $a : b = m : n$ gives $b : a = n : m$.

14. Def. 5. *Composition* is such a combination of the terms, that the sums of the two terms in the ratios, are compared with the corresponding terms in those ratios; thus, $a : b = m : n$ gives $a : (b + a) = m : (n + m)$.

15. Div. 6. *Division* is such a combination of the terms, that the differences of the terms of the two ratios, are compared with the corresponding terms in those ratios; thus, $a : b = m : n$ gives $a : (b - a) = m : (n - m)$.

16. The. I. The product of the means is equal to the product of the extremes.

Conversely, if the product of two factors be equal to the product of two other factors, the factors of either product may be means, and the other factors extremes in a proportion.

Let $a : b = m : n$. Write the ratios in the fractional form (6);
$\frac{b}{a} = \frac{n}{m}$. multiply by both denominators (Ax. 1);
$bm = na$. which shows the first part of the theorem
$\frac{b}{a} = \frac{n}{m}$. to be true. Now let $bm = an$. Divide by
$a : b = m : n$. a factor of each product (Ax. 2); and write ratios in the common form (6); which shows the second part to be true.

17. Scho. 5. The product of the means being equal to the

product of the extremes, may be taken as a test of the truth of a proportion.

18. Cor. 2. Proportional quantities may be in proportion by alternation (12), or by inversion (13). For the theorem (16) is sufficiently general to admit of such changes (17).

19. The. II. If two proportions have like antecedents, the consequents may form a proportion.

Conversely, if they have like consequents, the antecedents may form a proportion.

Let $\left\{\begin{matrix} a:\ b=m:\ n. \\ a:\ x=m:\ y. \end{matrix}\right\}$ By Alternation. (18) $\left\{\begin{matrix} a:m=b:n \\ a:m=x:y \end{matrix}\right\}$ By Ax. 3. $b:\ n=x:\ y$

Let $\left\{\begin{matrix} a:\ b=m:\ n \\ x:\ b=y:\ n. \end{matrix}\right\}$ By Alternation. (18) $\left\{\begin{matrix} a:m=b:n \\ x:y=b:n \end{matrix}\right\}$ By Ax. 3 $a:\ m=x:\ y$

which shows the theorem to be true.

20. Cor. 3. If two proportions have a common ratio, the other ratios may form a proportion.

21. The. III. Equimultiples of the terms of a ratio, form an equal ratio.

Take $a:\ b$. Then $\frac{b}{a}=\frac{mb}{ma}$ by Ax. 4; which shows the theorem to be true.

22. Cor. 4. Writing these ratios in the common form ($a:\ b = ma:\ mb$), shows that equimultiples of two quantities, are proportional to those quantities.

23. Cor. 3. Writing this proportion (22) by alternation, ($a:\ ma = b:\ mb$), shows that the consequents may be *any* equimultiples of the antecedent.

24. Cor. 6. Letting m be a fraction (22), shows that like parts of two quantities are proportional to those quantities; also according as m is an improper or a proper fraction, that two quantities may be increased or diminished by like parts, and the results be proportional to those quantities.

25. Cor. 7. Applying The. 3 (21) to both ratios in the proportion ($a:\ b=x:\ y$) = ($\frac{b}{a}=\frac{y}{x}$) = ($\frac{mb}{ma}=\frac{my}{mx}$) = $ma:\ mb=mx:\ my$:), shows that equimultiples, or like parts, of proportional quantities are proportional; also, that proportional quantities may be increased or diminished by their like parts, without disturbing their proportionality.

26. The. IV. Proportional quantities are in proportion by composition (14), or by division (15). Thus, $a : b = m : n$ gives $a : (b + a) = m : (n + m)$. For the consequents being equimultiples of the antecedents (5), the addition or subtraction of the antecedents, would give (23) equimultiples of those antecedents; which shows the theorem to be true.

27. The. V. In a series of equal ratios the sum of the antecedents and the sum of the consequents, are proportional to either antecedent and its consequent. Let. $a : b = m : n = x : y$, then will $a : b = (a+m+x) : (b+n+y)$. For each consequent being the same multiple of its antecedent, the sum of the consequents must be a like multiple of the sum of the antecedents.

Hence (22) the theorem is true.

28. Cor. 8. The sums of the corresponding terms of several proportions are proportional; provided the ratios are all equal.

29. The. VI. The products of the corresponding term of two or more proportions, are proportional.

Let $\left\{\begin{matrix} a : b = m : n \\ c : d = x : y \end{matrix}\right\}$ Take the product of the extremes, and of the means (16); multiply these equations together (Ax. 1), arranging the factors properly; and take one pair of factors for extremes, and the other for means (16); which shows the theorem to be true.

$\left\{\begin{matrix} an = bm \\ cy = dx \end{matrix}\right\}$

$(ac)\ (ny = (bd)\ (mx)$

$(ac) : (bd) = (mx) : (ny)$.

30. Cor. 9. Let the given proportions be identical; then the products would show that like powers of proportional quantities are proportional. J. S. R.

THE BIBLE IN SCHOOLS.

I HAVE always been strongly in favor of secular education, in the sense of education without theology; but I must confess I have been no less seriously perplexed to know by what practical measures the religious feeling, which is the essential basis of conduct, was to be kept up, in the present utterly chaotic state of opinion on these matters, without the use of the Bible. The pagan moralists lack life and color, and even the noble Stoic, Marcus Antoninus, is too high and

refined for an ordinary child. Take the Bible as a whole; make the severest deductions which fair criticism can dictate for shortcomings and positive errors; eliminate, as a sensible lay teacher would do, if left to himself, all that it is not desirable for children to occupy themselves with — and there still remains in this old literature a vast residuum of moral beauty and grandeur. And then consider the great historical fact that, for three centuries, this book has been woven into the life of all that is best and noblest in English history; that it has become the national epic of Britain, and is familiar to noble and simple, from John-o'-Groat's House to Land's End, as Dante and Tasso were once to the Italians; that it is written in the noblest and purest English, and abounds in exquisite beauties of mere literary form; and, finally, that it forbids the veriest hind who never left his village to be ignorant of the existence of other countries and other civilizations, and of a great past, stretching back to the furthest limits of the oldest nations in the world. By the study of what other book could children be so much humanized and made to feel that each figure in that vast historical procession fills, like themselves, but a momentary space in the interval between two eternities; and earns the blessings or the curses of all time, according to its effort to do good and hate evil, even as they also are earning their payment for their work? — *Prof. Huxley.*

THE IMMENSITY OF SPACE. — Our own day has witnessed the first exact measurement of the distance of the nearest fixed star, which is twenty-one millions of millions of miles. A learned calculator has shown, that in the space around our solar system there is room in one dimension, or one straight line, for twelve thousand solar systems; in two dimensions, or in one plane, there is room for one hundred and thirty millions of solar systems, and in an actual sidereal space of three dimensions there is room for one and a half million millions of solar systems the size of our own. Such are the *blanks* in the scheme; how fearful the thought of such physical immensity!

Dr. Alexander.

NEARER HOME.

[This well-known hymn of Phœbe Cary's has appeared in various shapes, — in some instances so altered by bungling hands, as to be well nigh spoilt. It was written in 1852. A writer in *Harper's Bazar* says that Miss Cary's latest revision left it as here given.]

One sweetly solemn thought
  Comes to me o'er and o'er:
I'm nearer my home to-day
  Than I ever have been before;

Nearer my Father's house,
  Where the many mansions be;
Nearer the great white throne,
  Nearer the crystal sea;

Nearer the bound of life,
  Where we lay our burdens down;
Nearer leaving the cross,
  Nearer gaining the crown.

But the waves of that silent sea
  Roll dark before my sight,
That brightly, the other side,
  Break on a shore of light.

Oh, if my mortal feet
  Have almost gained the brink,
If it be I am nearer home
  Even to-day than I think —

Father, perfect my trust,
  Let my spirit feel in death
That her feet are firmly set
  On the Rock of a living faith!

Editor's Department.

THE STATE MEETING.

THERE was a noble gathering of teachers in Boston at the late annual meeting of the State Association. The number present at the meetings on Friday could hardly have been less than three thousand, and the Saturday meeting was attended by about half that number.

The management of the meetings was admirable. No time was lost in attending to mere business matters. The programme was carried out almost to the letter, and the important subjects assigned were ably presented. There has been no meeting for some years in which so much time was spent in the consideration of general educational questions, and questions bearing upon legislation, as this last.

We wish our pages would allow us to give all the papers that were read. Every one was worthy the occasion. Some of them we shall lay before our readers; but all of them ought to be gathered together in one volume.

PROCEEDINGS OF THE TWENTY-SEVENTH ANNUAL MEETING OF THE MASSACHUSETTS STATE TEACHERS' ASSOCIATION.

THE Association met on Thursday, Oct. 19th, at 7 1-2 o'clock, P. M., in the hall of the Lowell Institute, Boston. The chair was occupied by the President, E. B. Hale, of Cambridge. Prayer was offered by Rev. J. M. Manning, D. D. The following committees were appointed:—

On Nominations:—G. K. Daniell, Boston; J. W. Dickinson, Westfield; M. W. Tewksbury, Fall River; G. E. Hood, Lawrence; A. G. Boyden, Bridgewater; Charles Hammond, Monson; C. O. Thompson, Worcester; N. T. Allen, Newton; J. A. Page, Boston.

On Teachers and Teachers' Places: — J. P. Payson, Chelsea; G. T. Littlefield, Charlestown; Francis Cogswell, Cambridge.

On Resolutions: — W. E. Eaton, Charlestown; C. C. Chase, Lowell; A. J. Phipps, Medford.

Prof. Agassiz, of Cambridge, was then introduced and addressed his audience in a very interesting and instructive manner. He spoke of the need of

improvement. He commenced teaching a Latin School at the age of fourteen years, and had been teaching ever since, a period of half a century. He therefore claimed the right to be critical. We were too proud of our success, and too confident of the excellence of our school system. It had accomplished much, but it had failed to give the people that culture necessary to the maintenance of republican institutions. A study of the people convinced him that their defects in language and character arose from wrong methods of teaching. There was too much dependence upon the memory, and too little exercise of the mind. Classes and schools were too large, and the teachers too few. The large school-houses reminded him of barracks for soldiers, rather than places where children are to be taught. Large schools demand a discipline which produces a uniformity which cramps and represses many scholars. The teacher is obliged to teach too many subjects, and must be nowadays a living encyclopædia in order to be successful. Special teachers should be employed for different branches. The text-books are defective, and are mostly made by men who write as a trade rather than from knowledge. The teacher should be the text-book. The children should be taught more about nature, and from the objects themselves. There should be instruction in physical geography and geology. Botany, zoölogy, and physiology should follow. Too much time was spent upon grammar. The living language which was to be spoken was all that was needed.

The Rev. A. P. Peabody, D. D., of Cambridge, was next introduced, and gave a fine address upon "The Light that there is in Words." The following report of it is from the *Daily Advertiser*: —

Men have embodied in their words more than their own wisdom. Words by their changes show phases of progress. New words cannot be made by an individual, but must be accepted as fitted to the public want and filling a real void. Receptivity is a more essential factor in word-making than invention. The American word "squatter," for example, was accepted by the whole world, while the word "spheterize," invented by literary men, could never pass beyond their own clique. Proper names are almost always descriptive or historical, even in colonies whither they have been imported. Of such names many examples were given by the speaker. Terminations also, such as "chester," "caster," "ford," "borough," are suggestive of the origin of the names. Christian names originally described the person or some circumstance connected with his birth, while others denote condition or some parental feeling. Many surnames grew from Christian names, as "Charles Richardson," from "Charles, Richard's son," "Thomas Dixon," from "Thomas, Dick's son." They were sometimes local appellations, or given from some trade or calling. The old English family names are generally those of places, never of trades. The significance of names ought to be made an educational force by assisting the scholar to remember them through association with their meaning. An ancient name is often a condensed biography. The four names of a Roman frequently convey all that is known of him, — his birth, family, gens, and noble action. Verbs, adjectives, and common nouns have likewise their historical bearing. Of these, examples are found in the words "ostracize," which might be the text for a whole volume of the history of political condition; "assess," originally meaning "to

sit by"; "chancellor," derived from *cancelli*, a lattice; "ceremony," and numerous others. Christianity changed the force of many words by its new teaching, making what had been reproaches to mean high praises. Other words are still used which have entirely lost their significance; for example, the trial by "peers" in America. In the language of every day there is a vast amount of condensed poetry quite unknown to those who use it.

The speaker urged the importance of the study of foreign languages, not only French and German, but the classical tongues, which are of great importance in the study of grammar as a general science. Latin at least ought to be studied by every boy and girl who means to be well educated, and time should be made for it by leaving out things of no value. English grammar is generally of no use whatever until a man has studied Latin or French. The speaker urged very earnestly the continued study of the classics. Language is emphatically a religious study. The Eternal Spirit has sown language full of its own wisdom, and the philologist is tracing the divine thought in the spiritual creation.

At the close of Dr. Peabody's address the Association adjourned.

FRIDAY, Oct. 20.

HIGH SCHOOL SECTION.

The beautiful hall of the Girls' High and Normal School was filled by the High School teachers of the State and those interested in High School instruction. Ephraim Hunt, Head-master of the Girls' High and Normal School, presided. Prayer was offered by Rev. W. H. Cudworth, chairman of the committee on that school. We take the following report from the *Evening Traveller*: —

Prof. Morse was unavoidably absent, and the lesson which he was to conduct, was necessarily not given.

A paper was read by Miss Jellison, of the Girls' High and Normal School. Subject: Is it advisable to continue the study of English Grammar in its present artificial form? If not, what measures ought to be adopted to secure a more rational introduction to the study of the English language?

The young lady began by showing the waste of power on the part of pupils in their attention to certain studies. An interesting experience of a young lady in her walks in gaining knowledge was given. When she became a teacher she taught what was given to teach and grammar was her stumbling block; all the text-books are theoretical; if any purpose is arrived at by the text-books, that purpose was unaccomplished, all the good gained was certainly outside the "science of grammar." The pupils had the means and not the end.

One harm was the distaste caused in the pupil for language. A second was the demoralization of teachers in endeavoring to reduce to a mechanical thing that which was by no means mechanical. The system strikes the death-blow to originality of thought and speech.

The paper was full of force, wit, and sharp quotations, and most interesting in its character, and clearly established that the use of grammar, as taught in our public schools, was nonsensical and harmful in the highest degree.

Example first, rule afterwards, was the motto of the day; and the study of literature, rather than grammar.

Mr. Perkins opened the discussion of the subject, and agreed with the lady's opinion. English Grammars nearly all commence with the definition "English grammar teaches how to speak and write the language correctly." If it did, it was not a success, for few scholars ever learned to talk from their grammar. The proper way of teaching the English language was by example and correction of faults.

Mr. Greenough, of the Normal School of Rhode Island, said the great mischief was that pupils had been put to the using and deducing of rules before the use of facts. What we want to do is to begin with the study of language, and from the language itself to deduce the few simple rules which would naturally come. Pupils should be taught to manufacture their own expressions.

Mr. Leighton, of Melrose, rose to defend the text-books. It seemed to him that if any text-book in grammar was used in teaching as an arithmetic is used, the end would be gained. By giving examples on the board, the pupil would soon learn to derive his own rule from the examples furnished him.

Mr. Hills thought that the imperfections of a grammar were dwelt upon, while the good points were passed over.

If grammars were founded upon the proper use of the language they must be useful. Let the class make sentences and then parse them, and we should soon gain good. Language was the main point in this study, and other languages than our own were useful in learning our own.

Mr. Howison, of the English High School, was of the opinion that the use of the standard text-books was productive of more good than harm. The children who used bad English came from families that used worse English than themselves. He thought that the text-books did teach how to speak and write the English language correctly, and the improper use of the text-books was the source of the harm done.

The chief defect in our grammars was the attempt to bring into them the rules of inflected forms of other languages.

The gentleman read a summary of what seemed to him to be the defects in our grammars.

The general defects were as follows:

1st. Failure to discriminate between the conceptions of grammar, logic, and rhetoric. 2d. A consequent muddle of the treatment of etymology. 3d. Defects in the treatment of syntax. 4th. A false and imbecile system of analysis. The speaker then treated of the subject of defects under these four general heads to some length and with much acumen.

Mr. Hunt wanted to know why pupils of twelve years were obliged to study this pretended science. For himself, he would be glad if the whole system was abolished from the grammar schools. Any other study would be better in its place.

Mr. Knight did not believe in teaching parsing, and was so situated that he could carry out his belief, but he did use analysis.

Mr. Greene believed that as soon as scholars began to spell they were old

enough to learn etymology. He spoke of the system adopted by himself in the Oread Institute in teaching grammar, or the first steps of etymology.

In syntax he would require in the Grammar schools only the learning how to speak correctly. In the higher schools he believed in the scientific and thorough logical pursuit of the whole subject.

Mr. Thompson said he had heard more good things about the English language than he had heard before, and the convention was evidently making progress.

He believed that the study of language should be begun even in the Primary schools. He also thought that reading the literature of our country would unwittingly foster good style of speaking and reading, which could be gained with much difficulty in other ways.

Mr. Harrington, Superintendent of the New Bedford schools, said that he rose to dispute the gentleman who had said that we had made no progress. Why, he said, we 've made a world of progress in the mere investigation of the subject of parsing.

A few years ago the pupils were engaged in ground and lofty tumbling among sentences in Milton and Cowper, and now it was advocated to do away with all this.

Mr. Swinerton said that a text-book was a most important part of school apparatus. He for the first time had heard gentlemen arise to defend text-books, and he was pleased with this. [Applause.]

Messrs. Hunt, Greene, and Howison were chosen a committee to draw up a plan of grammar for our schools, and to publish the same in the *Massachusetts Teacher*.

Prof. Ternault, of the Normal School, gave a lesson on free-hand drawing, and explanation of the manner of using the crayon and blackboard. This exercise was of a very interesting nature.

The afternoon session opened at 2 o'clock, with the discussion of the subject of "The Decimal System," after which came up "The Course of Study for High Schools." The gist of the discussion on this subject was, in effect, what study should be taken up, when should it be commenced, and how far pursued. Among the gentlemen taking a part, were Messrs. Harrington and Rugg of New Bedford, Hagar of Salem, Parsons of Waltham, Williston of Cambridge, Howison, Minns, Collar, Philbrick, and Gardner of Boston, and several others. The discussion was animated and interesting, and occupied over two hours.

GRAMMAR SCHOOL SECTION.

The Grammar school teachers completely filled Tremont Temple. C. Goodwin Clark, master of the Bigelow School, presided. Prayer was offered by Rev. Geo. A. Thayer, of South Boston.

H. H. Lincoln, of the Lyman School, East Boston, read an interesting and useful paper on "Some of the Elements of Success in Teaching." D. B. Hagar, of the Salem Normal School, followed upon the same subject.

L. Dunton, of the Lawrence School, read a good paper upon "The Office of Text-books in Common School." This was followed by a paper by H. C Hardon, which ably discussed the usefulness of drawing in public schools.

The afternoon session was opened by remarks from D. P. Howe, of Boston, upon the subject of grammar.

Joshua Bates, of the Brimmer School, read an admirable paper upon "Morals and Manners." The subject was discussed by Rev. J. T. Sargent, Rev. A. B. Muzzey, H. H. Lincoln, J. Jameson, and Geo. B. Emerson.

The Rev. Henry N. Hudson then read a capital paper entitled, "Studies in English Literature."

The exercises of the day were interesting throughout, and were attended by large numbers of teachers.

PRIMARY SCHOOL SECTION.

The Primary Teachers met in the hall of the Lowell Institute. R. C. Metcalf, of East Boston, presided. Prayer was offered by Rev. D. W. Waldron, of East Boston.

John D. Philbrick, Superintendent of Schools, Boston, spoke in a very practical and highly interesting manner. He thought more pains should be taken to select good teachers for the Primary Schools than for the higher schools. Primary instruction was the most important of all. Much more should be done to provide for the proper training of teachers. Great improvements had been made, but he looked for still greater progress. He was disposed to regard the kindergarten methods with much favor.

L. M. Chase, of the Washington School, Boston Highlands, read a paper on the "Characteristics of a good Primary Teacher." This met with so much favor that the teachers voted to have it published. It will appear in the next number of the *Teacher*.

Thomas Emerson, Superintendent of Schools, Newton, spoke upon the general subject of teaching, giving illustrations of various methods. Some time was devoted to answering questions, and much practical information was given.

N. A. Calkins, of New York, explained object-teaching, and its relations to the proper development of the child's mind. He urged its general adoption.

The afternoon session was held in the Girls' High and Normal Schoolhouse. Four rooms were occupied, and various illustrative exercises were given in each. This was a new feature, and the results were highly satisfactory. It had been found difficult for some ladies to make themselves heard in a large hall, difficult also for a large part of the audience to get the advantage of blackboard exercises. By using the commodious and convenient rooms of the High and Normal School, and arranging so that the same exercises were given in each, these difficulties were overcome.

Mrs. Anna C. Sullivan, Superintendent of the Cambridge Training School, read a practical paper upon spelling.

Bertha W. Hintz, connected with the Primary department of the Boston Training School, gave illustrative lessons in number, and an object lesson. Miss Jones, of the Worcester Training School, presented the subject of reading.

Frances H. Turner, of the Prescott School, read an essay on "Phonetic

Reading in the Lower Grades." Miss Stoddard gave a lesson illustrative of quality.

Jane H. Stickney, Superintendent of the Boston Training School, read a paper upon number. Miss Williams showed, in a very amusing manner, the difficulties of teaching spelling.

EVENING SESSION.

The Association came together in the evening in Tremont Temple, and the chair was occupied by President Hale.

Walter Smith, Esq., of England, was introduced, and delivered the excellent address on "Drawing and Art Education," which will be found in the present number. The address was exceedingly well received. At its conclusion, H. F. Harrington, Superintendent of Schools in New Bedford, offered the following resolution, which was unanimously passed:

Resolved, That the Massachusetts Teachers' Association, having had most satisfactory evidence from the paper read by Walter Smith, Esq., before it this evening, of his admirable fitness for the objects for which he has been engaged, warmly congratulate the State Board of Education in his engagement, and commend him to the hearty sympathies and regards of the school committees and teachers of the State, in the prosecution of his labors.

The Hon. Joseph White, Secretary of the Board of Education, then presented an able argument in favor of a State educational tax, the proceeds of which should be so distributed among the towns and cities of the Commonwealth as to increase the efficiency of the schools.

SATURDAY, Oct. 21.

GENERAL MEETING IN TREMONT TEMPLE.

The Association came together at 9 o'clock, A. M. Tremont Temple was well filled. Prayer was offered by Rev. H. F. Harrington, of New Bedford.

The treasurer's report was read and accepted. The receipts for the year had exceeded the expenditures, but the settlement of old accounts had reduced the balance in the treasurer's hands to $1.58.

W. E. Eaton, of Charlestown, Chairman of the Committee on Resolutions, reported the following, which were unanimously adopted:

Resolved, That the thanks of the Association be tendered to those railroads of the State, which have given free return tickets to its members.

Resolved, That the thanks of the Association be tendered to those teachers and educators, who, by essay, address, or otherwise, have given of their time and thought to make profitable and interesting the meetings of this Convention.

Resolved, That the thanks of the Association be further tendered to the retiring officers — especially to the President, whose ability and admirable tact have been so largely instrumental in giving success to this Convention.

Resolved, That we, members of this Association and teachers of Massachusetts, hereby reaffirm our belief in the importance of these gatherings in kindling zeal, influencing thought, and lifting the profession to a higher level in the estimation of others; and we hereby pledge ourselves, as we separate for our different places of labor, to redoubled efforts in this great cause which we believe to be so vital to the perpetuity of the State and the Republic.

The matter of a State educational tax was discussed by A. P. Marble, of

Worcester, and several others, after which the following resolution, offered by Mr. Marble, was adopted: —

Resolved, That in the interest of the children of the State, and for the establishment of a school system, a State tax should be levied, the proceeds to be distributed among the cities and towns of the Commonwealth in proportion to actual school attendance.

The Hon. Warren Johnson, Secretary of the Maine Board of Education, made a very effective address, showing the advantages of a more efficient and complete supervision of schools by means of county or district superintendents.

H. F. Harrington, of New Bedford, and General Henry K. Oliver, of Salem, each read an excellent paper urging the compulsory attendance of children upon the schools. Hon. Joseph White followed with some earnest words.

Hon. John D. Philbrick read a carefully prepared paper arguing the necessity of additional provision for the training of teachers.

The Committee on Nominations made their report early in the morning, re-nominating E. B. Hale, of Cambridge, for President; but as Mr. Hale insisted upon his declination, the report was recommitted. At the conclusion of Mr. Philbrick's paper this report was again presented. As there were no names of ladies reported, considerable discussion arose in regard to the manner of supplying the omission. Finally the votes were distributed, and several gentlemen gallantly withdrawing their names, the names of ladies were substituted. The Association proceeded to ballot, and officers were elected as follows:

President: — Charles Hammond, Monson.

Vice-Presidents: — E. A. Hubbard, Springfield; A. G. Boyden, Bridgewater; E. A. Comins, Worcester; J. L. Brewster, Lawrence; N. T. Allen, Newton; C. Emery, Charlestown; A. P. Marble, Worcester; J. Kimball, Salem; C. P. Rugg, New Bedford; M. C. Stebbins, Springfield; Sarah J. Baker, Boston; Jane H. Stickney, Boston; Amelia H. Pitman, Boston.

Councillors: — D. B. Hagar, Salem; John D. Philbrick, Boston; John. P Payson, Chelsea; Charles Hutchins, Boston; D. D. Patten, Winchester; F. A. Hill, Chelsea; L. F. Warren, West Newton; H. H. Kimball, Boston; S. A. Chase, Lowell; J. W. Dickinson, Westfield; Maria W. Turner, Boston; Mary F. Pierce, Cambridge.

Recording Secretary: — F. F. Preble, Boston.

Assistant Recording Secretaries: — A. P. Gage, Charlestown; E. N. Southworth, Boston.

Corresponding Secretary: — E. B. Young, Boston.

Treasurer: — D. W. Jones, Boston.

The following resolutions were offered by Mr. Littlefield, of Charlestown, and unanimously adopted: —

Resolved, By the Massachusetts State Teachers' Association, that a law should be enacted by the Legislature of Massachusetts, compelling the attendance of every child, at least between the ages of seven and thirteen years, upon some school during the entire period for which the town is required to maintain public schools.

The following resolution was offered by George B. Hyde, of Boston: —

Resolved, That the Board of Directors consider the expediency of holding the next meeting of this Association in the central or western part of the State; and at a season of the year when the schools are generally not in session.

A division of the question was called for. The former part passed unanimously; the latter part met with some opposition, but finally passed.

The Association then adjourned, *sine die*.

AMERICAN PHILOLOGICAL ASSOCIATION.

THIS Association held its third annual meeting in New Haven, Ct., during the last week in July. Nearly one hundred members were present from different parts of the country and Canada. Many scholarly and valuable papers were read, as well as some not so valuable. The subjects treated embraced the Indian, Celtic, Latin, and Greek languages. Prof. March read a paper upon the "Origin of Language." Prof. Goodwin's paper was on the "Chronology of some important events mentioned in the oration of Demosthenes on the Crown."

Last year the Association resolved in favor of the continental method of pronouncing Greek and Latin. The matter came up again this year, and after considerable discussion the decision of last year was reaffirmed. It is recommended to pronounce the diphthongs *au* like *ow* in *now*, *ou* like *oo* in *moon*, and *eu* like *u* in *duty*.

It seems we may use such expressions as *is being built*, in spite of Richard Grant White. Prof. Whitney read a paper written by Fitz Edward Hall of London, showing that Mr. White's *is building* is quite as absurd as he makes out the other form to be. Mr. Hall cites numerous examples from the best writers to establish the correctness of the compound form. Still, our sympathies are with Mr. White. It is certainly legitimate to use the present participle in a passive sense when no obscurity arises; and such forms as *will be being built* and *to be being built* are exceedingly awkward, to say the least.

Prof. William W. Goodwin, of Cambridge, was chosen President for the ensuing year. The next annual meeting will be held at Providence, R. I., July 24, 1872.

AMERICAN INSTITUTE OF INSTRUCTION.

THE following correspondence will show that the Institute "still lives," and also, the interest felt in it by its friends in Maine, in sending so early and cordial an invitation for its next annual meeting to be held in one of their cities: —

LEWISTON, ME., Sept. 26, 1871.

ABNER J. PHIPPS, Esq., *Pres. American Institute of Instruction.*

Dear Sir, — By vote of the Superintending School Committee, the American Institute of Instruction is invited to hold its next annual session in this city, and a Hall is tendered for the meeting. I have also to add that it would

be pleasing to the Committee to have your next session here, and I can promise you the cordial co-operation of our own Board and of the citizens generally. We doubt not that a liberal reduction in rates of board will be made by our hotels to members of the Institute attending.

Hoping to have a favorable response, I remain,

Sincerely yours,

NELSON DINGLEY, JR.,
Chairman S. S. Committee of Lewiston.

The following answer was returned: —

BOSTON, Sept. 29, 1871.

NELSON DINGLEY, JR., ESQ., *Chairman S. S. Committee of Lewiston, Me.*

Dear Sir, — Your letter of the 26th instant is recorded, communicating the invitation of your School Board to the American Institute of Instruction to hold its next annual meeting in your city. In behalf of the Institute I thank you, and those whom you represent, for the very cordial invitation so early extended.

The meeting of the Directors will not be held for some months; but I have no hesitation in accepting the invitation, knowing that my doing so will meet their cordial and unanimous approval.

Yours very truly,

ABNER J. PHIPPS,
President of the American Institute of Instruction.

TEACHERS' MEETINGS.

There will be meetings at the Educational Room as follows: —

Nov. 4th. Subject of discussion: What is the best method of conducting a Recitation?

Nov. 18th. Subject of consideration: District Supervisors.

Dec. 2d. Subject of discussion: What can the teacher do toward securing constant attendance?

Exercises from 2.30 to 4 P. M. All persons interested are requested to be punctual, and are cordially invited to participate in the conversations.

Social meeting from 4 to 5 P. M.

NATHAN E. WILLIS,
President.

SIMEON DUNBAR,
Secretary.

INTELLIGENCE.

S. H. PEABODY, of the High School, Chicago, has been elected Professor of Mathematics in the State Agricultural College, at Amherst.

A. D. SMALL, of the High School, Newport, R. I., has been elected Superintendent of schools in that city. Salary, $2,500.

CHICAGO. Your readers already know the particulars of our terrible calamity. Not less than 2,500 acres of buildings, including all of our magnificent business blocks are swept into ruins, and 100,000 people made homeless, many of them barely escaped with their lives. All are alike in suffering loss of property, few being exempt. The teachers are no exception, many losing all their possessions, and fleeing for miles for safety before the pursuing flames. As far as we can learn, no public school-teacher lost her life, a fact for which we are profoundly grateful. Yet, though they have been able to accumulate scarcely anything during the few years of comparative prosperity, they met on the 12th October, and passed unanimously the following resolution: —

"*Resolved*, That we tender our services to the Board of Education for one year, relying on them for such remuneration as they will be able to give, be it much or little."

There was a most hearty willingness to suffer and sacrifice for the suffering city, and every remark which hinted at the early resumption of school labor, even without the prospect of remuneration, was heartily applauded. They feel that there could be no greater source of demoralization, at this crisis, than to give up the schools; and, not like the trades-unions, who will not lift a finger unless they see the money, and then cry "eight hours a day," but like noble men and women as they are, volunteer to run the schools for no pay whatever if necessary, that the youth and children of the city may not become vagabonds and curse society, and that the hands of the business men of the city may be upheld and strengthened. We know that we will not be permitted to suffer nor be forgotten when their time of prosperity comes again. All were eager to forego every comfort, yield every right, endure toils and suffering, trusting to the good-will of the Board to feed, clothe, and shelter them. The Superintendent offered his services for one year gratuitously, and Inspector Queal, who has as yet lost but little from the fire, said he would place $2,000 in the hands of the Superintendent, to be used for the relief of suffering teachers. The speeches were nearly all of a most enthusiastic character, calculated to awaken courage and hope. It was believed that people would not only not ask the teachers exorbitant prices for board, but actually open their doors and ask them to become members of their families during the school year. We sincerely hope that this will be the case, even though hitherto they have not always chosen to have teachers in their families, and sometimes refused to trust them when the Board could not pay promptly. We do not believe that there will be any disposition to make money at the expense of the teachers, in any way whatever, or to keep up the line of separation between the people and the teachers. Such seemed to be the sentiment of the meeting, and there was no disposition to listen to anything that was not in the highest degree self-sacrificing. Though all were without money or credit, they resolved to live, in some way, and instruct the children. It was intimated that they would not be paid more than half their present salaries, and might not receive any more for months — that the other half was needed for the establishment of business. There was a most magnanimous feeling throughout, and, following their example, we expect to see all city officials, and other employees of the city, either offer their services gratuitously, or labor for what the city is able to pay. Some members of the Board

have begun the good work by offering to take teachers into their families, and it is confidently expected that the citizens generally will do the same.

Those of the teachers who had lost but little, and had homes to which they could go, gladly offered their places to those who have lost all. In short, there is as much energy, as much devotion to the welfare of these people, as much heroism, as much faith in the future of Chicago among the teachers as among the business men, whose fame in these respects is world-wide.

The school buildings burned are the Jones, Kinzie, Ogden, and Franklin large grammar school buildings, and the Pearson Street, the Elm Street, North Branch, and La Salle Street primary schools, making a loss in buildings of $204,800, little of which, we understand, was covered by insurance. These schools contained about one-third of the teachers and pupils in the city.

At a meeting of the Board, held Tuesday evening, October 10, it was resolved to employ those teachers who were left most destitute, and send for the others as fast as needed. There will not be any examination of applicants for situations, therefore, till all of the present corps are again employed, and it will be useless for those who have not been teaching here to think of obtaining situations for some time to come. It is also determined to cut down the number of teachers to the least possible force, and to dispense, for the time, with the music, drawing, and German teachers. The probability is that pupils will leave school at an earlier age than hitherto, and instruction will be confined more closely to the three R's. Even during the former prosperous years the entire grammar department (the four highest grades) contained only about one-tenth as many pupils as each of the three lowest grades. It becomes necessary at this time, therefore, to do in the shortest possible time what can be done for the pupils to prepare them for the ordinary business transactions of life. It shows us plainly what are considered the essentials of a primary education. Schools will open again as soon as the buildings are relieved of the unfortunate ones, and we are able to heat the buildings.

The High and Normal schools will be closed for a time, and the buildings used by the courts and their respective clerks.—I. S. B. *in the Chicago Schoolmaster.*

BOOK NOTICES.

PRIMARY LESSONS IN NUMBERS, ELEMENTARY ARITHMETIC AND COMMON SCHOOL ARITHMETIC. By D. B. Hagar, Principal of the State Normal School, Salem. Philadelphia: Cowperthwait & Co.

Three works, comprising Hagar's series of Arithmetics. The "Primary Lessons" and "Common School" make the regular school course; the "Primary Lessons" and "Elementary," the course for evening and other schools, when there is not opportunity for a full course.

One peculiarity of these books is, that mental arithmetic and written go hand in hand from the beginning to the end. Another is, their thoroughly systematic arrangement, and the lucid and concise treatment of each particular subject. By preliminary questions principles are first developed, then stated, and finally applied, and the rule thus formed.

The practical teacher will be particularly pleased to find nothing in the

books but what is essential. The author has not sought to exhaust his store of arithmetical knowledge, but to develop his subject as it should be presented to the childish and youthful mind. The confusion, therefore, so often wrought in the mind of the scholar by different statements of the same fact, and different methods of performing the same work, is avoided. The problems are not given to puzzle, but to facilitate an acquaintance with the methods by which they are to be wrought, and thus prepare for those which may arise in practical life. These characteristics evidently unfit the books for use in mathematical gymnasiums where feats of arithmetical legerdemain are to be practised; but just as evidently do fit them for use in the common school.

In some cases we should have introduced special rules; as, for instance, the finding of the interest at 7 3-10 per cent; and under some heads should have given more problems; but the wants of scholars have been generally so well met that any little lack of this sort can hardly effect our estimate of the general excellency of the books. They manifest, on the part of the author, what has always seemed to us to be the cause of his great success as a teacher, viz., a clear apprehension of the subject; ability judiciously to arrange and present that subject; a remarkable power of correct and concise statement; and, lastly, a thorough sympathy with the learner, and a familiar acquaintance with the avenues to his mind.

THE ELEMENTS OF INTELLECTUAL SCIENCE. A Manual for Schools and Colleges. By Noah D. Porter, D.D., LL.D. New York: Charles Scribner & Co.

President Porter, of Yale College, has done a good thing in abridging his great work, *The Human Intellect*. That was too voluminous and exhaustive for ordinary class use. This volume will meet the wants of many instructors and a large class of students. The more elementary parts are printed in larger type, and are to be studied by beginners. More advanced students can take also the portions printed in smaller type, and thus be led into a more thorough discussion of some of the views presented. This work can hardly fail of becoming the standard text-book upon this subject.

SCHOOL MANAGEMENT. By Alfred Holbrook, Principal of Normal School, Lebanon, Ohio. Lebanon, Ohio: Josiah Holbrook.

This work contains twenty-one lectures upon *School Management*. They cover almost the whole field of school work, are excellent in spirit, and of a practical nature. Experienced teachers, even, will find them very suggestive, and to young teachers they will be especially valuable.

PROGRESSIVE EXERCISES IN ENGLISH COMPOSITION. By R. G. Parker. Revised and enlarged by James H. Hamilton, M. D. Boston: R. S. Davis & Co.

Parker's *Exercises in Composition* has done excellent service in its day, and, indeed, has not yet gone out of use. The publishers, however, have now brought out a greatly improved edition. It is divided into four parts. The first treats of *words*, the second of *sentences*, the third of *discourse*, the fourth of various subjects. The work will retain its old friends and gain new.

ELEMENTS OF TRIGONOMETRY, Plain and Spherical. By Edward Olney, Professor of Mathematics in the University of Michigan. New York: Sheldon and Company.

This seems to us an excellent work. The author's method of presenting and illustrating his subject greatly aids the student. As a complete trigonometrical treatise, with its tables of logarithms and trigonometrical functions, it must rank among the very best of its class.

THE RISE AND FALL OF THE PARIS COMMUNE IN 1871; with a full Account of the Bombardment, Capture, and Burning of the City. By W. Pembroke Fetridge. New York: Harper & Brothers.

It is perhaps too soon to get a full and reliable history of the Paris Commune. The author of the present work was in Paris from March 6th till the surrender of the city to the government troops on the 29th of May, a careful observer of much that transpired, a diligent seeker of information. He throws much light upon men and measures, and gives a sad record of the terrible experiences of those few months. His work awakens an absorbing interest. It is illustrated by a map of Paris and numerous portraits of the prominent actors in the scenes described, taken from original photographs.

AT LAST: A Christmas in the West Indies. By Charles Kingsley. With illustrations. New York: Harper and Brothers.

Mr. Kingsley had for many years longed to cross the Atlantic, visit the West Indies and the Spanish Main. "At last" his desire is gratified. Hence the title of his book. He gives us not much that is new; but he presents many facts in a new light; lets us see things through his eyes, and enjoy them as he enjoyed them. Trinidad and the islands in its vicinity are the places visited.

A. WILLIAMS & CO., 135 Washington Street, send us also with the Harper's other publications, *Anne Furness*, a novel by the author of "The Sacristan's Daughter."

SHAKESPEARE'S COMEDY OF THE TEMPEST. Edited, with notes, by William J. Rolfe. New York: Harper & Brothers.

The very convenient and satisfactory edition of *The Merchant of Venice* has prepared the way for this most admired of Shakespeare's comedies. The history of the play is given, the plot unfolded, and extracts are taken from the criticisms of the best Shakespearian writers. A few expurgations were necessary, but the original text has been preserved as closely as possible. The notes indicate careful study on the part of the editor, a nice discrimination in regard to the use of words, and often give the reader a remarkable insight into Shakespeare's meaning. We hope Mr. Rolfe will continue his labors, and give us other plays of Shakespeare in the same form. The advantage of having these plays in light, handsomely-printed volumes is very great, especially for school use. If there were any doubts in regard to Mr. Rolfe's ability to perform work of this kind, the two volumes which have appeared must have entirely removed them.

ELEMENTS OF THE ANATOMY, PHYSIOLOGY AND HYGIENE OF THE HUMAN SYSTEM. By Justin R. Loomis, LL. D. Revised edition. New York: Sheldon & Company.

This work has the marks of a good text-book. It is systematically arranged, well written, giving all that is needed in our schools, and that within a moderate compass. Illustrations are abundant, and technical terms are explained. Such terms, however, are not frequently used in the text. Much explanatory matter is given in notes.

HYMNS OF PRAYER AND PRAISE. New York: A. S. Barnes & Co.

A beautiful little hymnal for family and social worship, compiled mainly from "Hymns of the Church." The selection of both hymns and tunes seems to be admirably adapted to the purpose designed.

THE UNITED STATES PATENT LAW: With instructions how to obtain Letters Patent for new Inventions. By Munn & Co., Solicitors of Patents, 37 Park Row, New York.

A convenient and useful little book for all interested in the obtaining of patents.

THE AMERICAN NATURALIST. It gives us great pleasure to call the attention of teachers, and of the advanced scholars in our schools, to this illustrated Magazine of natural history. It is published monthly at Salem, Mass., by the Peabody Academy of Science, at $4.00 per year, each issue containing 64 pages. It is edited by A. S. Packard, jr., and F. W. Putnam. It is admirable, both in matter and illustration, and ought to have a very large circulation. The October number contains "Experiments with Vibrating Cilia," by Jeffries Wyman, M. D.; "The Grasses," by W. W. Bailey; "Contributions to the Natural History of the Valley of Quito," by Prof. James Orton; the "Genus Hysterium, and some of its Allies," by Dr. J. S. Billings; "Some Differences between Western and Eastern Birds," by T. Martin Trippe; "Reviews," and "Natural History Miscellany."

MAGAZINES FOR THE YOUNG.

It is one of the good signs of the times that so many of our best writers are employed in furnishing the young with good reading. Publishers are spurred on by a healthful competition to meet most fully the youthful wants. There is undoubtedly a disposition on the part of some to give often what will sell, rather than what will improve. But, on the whole, we are glad to say that magazine literature for the young is improving in quality. In looking over the pages of the magazines that come to this office, as given below, we have been impressed with the seeming conscientious desire, on the part of publishers, innocently to amuse, faithfully to instruct, and in every way to improve, the many readers of their publications.

OUR YOUNG FOLKS. Boston, at 124 Tremont Street: J. R. Osgood & Co. $2.00 per annum. Worth the money many times over.

OUR BOYS AND GIRLS. Oliver Optic's Magazine. Boston, at 149 Washington Street: Lee & Shepard. $2.50 per year. A little larger than the above, and no higher price. Well conducted, and very popular.

THE SCHOOLMATE: an Illustrated Monthly for Boys and Girls. $1.50 per year. Boston, at 366 Washington Street: Joseph H. Allen. An old favorite, and constantly gaining new friends.

MERRY'S MUSEUM for Boys and Girls. $1.50 per year. Boston, at 14 Bromfield Street: Horace B. Fuller. Established by "Peter Parley," in 1841. For a long time *the* magazine for the young, and seemingly as good as ever.

THE LITTLE CORPORAL. $1.50 per year. Chicago, Ill.: John E. Miller. Thousands of the young will be glad to know that though "The Little Corporal" suffered from the Chicago fire, he is alive and still rendering the best of service.

THE NURSERY. A monthly magazine for youngest readers. $1.50 per year. Boston, at 36 Bromfield Street: John L. Shorey. Unrivalled. Everybody likes it, from the baby to grandfather.